

Requirements Capture

Wireless Energy Transfer

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The purpose of the Wireless Energy Transfer project is to address the issue of wireless energy transmission. Our ultimate goal is to make electronic devices *truly* wireless by eliminating the need for wired power transmission. Our device will use resonant inductive coupling that will achieve our previously mentioned goal while also being patentable and marketable.

While investigating novel uses of Wireless Energy Transfer, our initial emphasis concerns powering peripherals wirelessly from USB or outlet sources.

The product requirements are:

- Maintaining a completely wireless system.
- Aim for ~45% efficiency within a 7' radius.
- Device should be as compact as possible, i.e. minimize antenna/coil size.
- Possible circuitry to increase efficiency of the system.
- Device should be user-friendly, with intuitive set up/use.
- Useable and convenient distance from coil to coil.
- Cost-effective for an individual consumer
- Safe
- Compliant with FCC and other relevant standards
- Some sort of power transmission indicator (e.g. LED)
- Integrate with a marketable product (e.g. Wireless mouse, keyboard, laptop, ceiling fan)

In summary, these requirements are sufficient for us to complete our ultimate goal of a truly wirelessly powered system. We will use these requirements as guidelines for our conceptual design and physical implementation of our device.